Colorado River Programs

Interagency signing ceremony signals agreement on water transfers

Desert Sandwort (Arenaria macradenia var. macradenia)
© 2001 Larry Blakely

With a mandated reduction in California's draw from the Colorado River and the uncertainty of weather patterns, Metropolitan has looked to bolster its supply reserves through a number of storage and conservation programs and transfer agreements.

Interim Surplus Guidelines: Colorado River Use

On January 16, 2001, Secretary of the Interior Bruce Babbitt signed a Record of Decision to implement the Colorado River Interim Surplus Guidelines (Guidelines). Adoption of the Guidelines recognizes California's Colorado River Water Use Plan and its commitment to reduce its draw of Colorado River water.

The Bureau of Reclamation uses the Guidelines to determine the availability of surplus water to Metropolitan through 2016. Under a seven-state agreement, California has 15 years to reduce its draw on the river from about 5.2 million acre-feet to its basic apportionment of 4.4 million acre-feet a year in the absence of surplus water. During the 15-year ramp-down period, California would continue to receive surplus water from the river; the annual amount depends on whether there is a flood control release, or a full or partial domestic surplus condition.

The Secretary could, and did, suspend the Guidelines because the Quantification Settlement Agreement (QSA) was not implemented by December 31, 2002, and they will remain suspended until such time as either the QSA is executed or such other actions as are required by the Secretary are completed.

Arizona Water Bank

Interstate offstream water banking of Colorado River water provides an added water management opportunity for meeting the needs of Arizona, California and Nevada. In 1992, Metropolitan made an agreement with the Central Arizona Water Conservation District to allow unused Colorado River water to be stored in Central Arizona aquifers. The Southern Nevada Water Authority also participates in the program. Metropolitan has stored 89,000 acre-feet in Arizona under this program, with a recoverable amount of approximately 81,000 acre-feet. There is a statute limiting the annual recovery to no more than 100,000 acre-feet. Metropolitan intends to execute an interstate storage agreement with the Arizona Water Banking Authority.

Hayfield Groundwater Storage Program

The Hayfield Groundwater Storage Program was approved by Metropolitan's board in June 2000 and is expected to be operational in 2004. It is eligible for up to $35 million in reimbursement from the California Department of Water Resources. The program allows Colorado River Aqueduct water to be stored in the Hayfield Groundwater Basin in east Riverside County (about 50 miles east of Palm Springs) for future withdrawal and delivery to the Colorado River Aqueduct. Currently there is 67,000 acre-feet in storage.

Colorado River Programs

Chuckwalla Groundwater Storage Program

The Chuckwalla Groundwater Storage Program proposes storage of Colorado River water in the Upper Chuckwalla Groundwater Basin for future delivery to the Colorado River Aqueduct. The basin also is located in Riverside County about 70 miles east of Palm Springs. A feasibility study was approved by Metropolitan's board in June 2000. A $250,000 grant from the California Department of Water Resources was awarded to Metropolitan for a portion of the feasibility study. The anticipated benefits of this program echo those of the Hayfield Groundwater Storage Program, but development of the project is subject to the outcome of the feasibility study which takes into account the availability of surplus Colorado River water.

Lower Coachella Valley Groundwater Program

Metropolitan, in conjunction with Coachella Valley Water District and Desert Water Agency, is currently looking at the feasibility of a conjunctive use storage program in the Lower Coachella groundwater basin. The basin, which is currently in an over-drafted condition, has the potential to provide a total storage capacity for Metropolitan of 500,000 acre-feet. The Lower Coachella Program would have the advantage of using the All American and Coachella canals to deliver water for storage, preserving the full capacity of the Colorado River Aqueduct for service area demands.

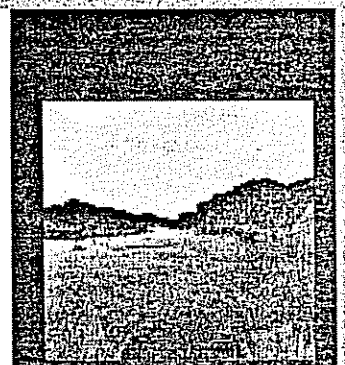
Cadiz Groundwater Storage and Dry-Year Supply Program

In October 2002, Metropolitan's board elected to forego the Cadiz Groundwater Storage and Dry-Year Supply Program. The action was taken because material changes had occurred since the Cadiz Project was approved for investigation. These changes included increased capital costs, limitations imposed by the groundwater monitoring and management plan, dramatically changed conditions on the Colorado River making it unlikely that there would be sufficient surplus water to store as the proposed program anticipated in the near term, and the difficulty of fully insulating Metropolitan from a Cadiz Inc. default.

Colorado River Conservation Programs

Metropolitan is involved in several Colorado River water conservation programs that are discussed in greater detail in the Conservation section of this report. These programs include:

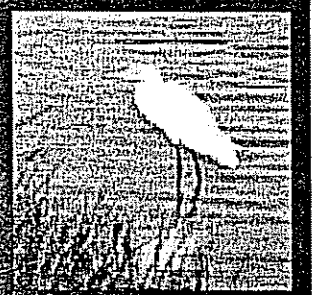
- Imperial Irrigation District/Metropolitan Water Conservation Program
- San Diego County Water Authority/Imperial Irrigation District Agreement for Transfer of Conserved Water
- Palo Verde Irrigation District Land Management, Crop Rotation and Water Supply Program
- Coachella Canal Lining Project
- All American Canal Lining Project



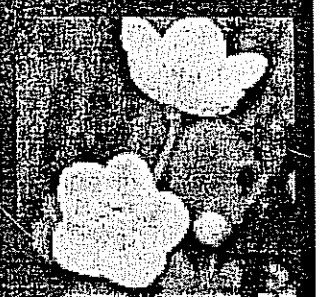
The Colorado River is the life source for several Western states.

Willowherb (Epilobium ciliatum ssp. ciliatum)
© 2001 Jeff Abbas

State Water Project Programs



Balancing urban and environmental needs



California Grass of Parnassus (Parnassia californica)
© 2002 Russell Towle

Metropolitan's Participation in CALFED

More than two-thirds of California's drinking water passes through the San Francisco-San Joaquin Bay-Delta (Bay-Delta). In June 1995, state and federal agencies with regulatory responsibility in the Bay-Delta system launched an historic partnership under the CALFED Bay-Delta Program to address issues of reliability and quality of supplies. Metropolitan has worked cooperatively with CALFED and other Bay-Delta stakeholders to develop balanced and cost-effective solutions.

This year, 50 Bay-Delta ecosystem restoration projects received nearly $60 million from state Propositions 13 and 204 providing much-needed funds for protection of habitat, wetlands and water quality research. Additional funding became available through the passage of Proposition 50 by voters in November 2002.

The Clean Water and Coastal Protection Bond of 2002 (Proposition 50) provides $3.44 billion to support projects throughout the state that are designed to clean our drinking water sources, upgrade existing infrastructure and treatment processes. It will also provide funding for desalination programs and state-of-the-art technologies to remove contaminants.

Metropolitan provided a $10,000 grant to the Sacramento River Watershed Program for the ongoing effort to preserve and enhance this critical watershed. This contribution is in addition to the $30 million Metropolitan advanced for environmental improvement projects in the Bay-Delta watershed.

Other 2002 milestones include:

- Passage of a CALFED governance bill to stabilize CALFED institutions and decisions and increase the role of stakeholders, including Metropolitan
- A proposed legal settlement that will resolve issues concerning the recent Monterey amendment to the water supply contracts for the State Water Project. The settlement would help to secure cost savings and significant operational benefits provided by the amendment
- A pending agreement that will increase State Water Project/Central Valley Project supplies up to 185,000 acre-feet annually by involving Sacramento Valley water interests with the shared responsibility to contribute water toward environmental needs and water quality standards
- Continued development of the South Delta Improvement Program that will increase the minimum pumping capacity of the State Water Project Banks pumping plant by at least 180,000 acre-feet annually and advance the ability to move large volumes of additional transfer water in the future when the water is available
- Second successful year operating the Environmental Water Account, a program adding flexibility to the state's water delivery system by providing water at critical times to meet environmental needs without impacting the water supply needs of urban and agricultural users

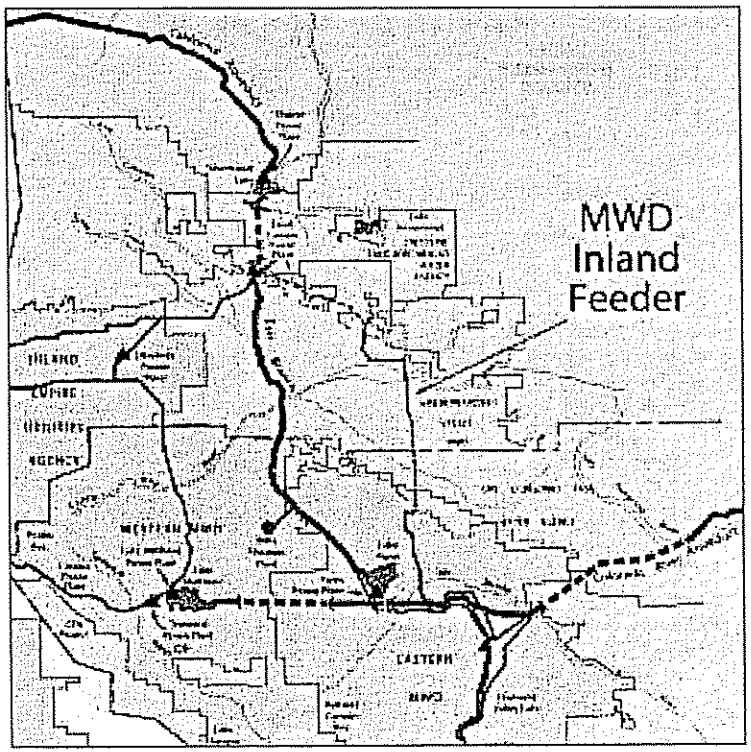
State Water Project Programs

Dry-Year Transfer Program

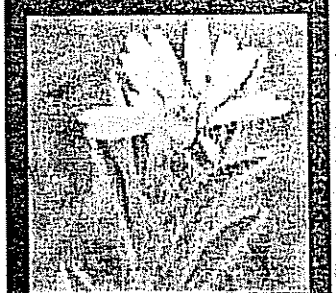
To ensure water supply reliability, Metropolitan is entering into a number of water transfer and storage agreements. In November 2002, Metropolitan's board authorized one-year transfer option agreements with several Sacramento Valley water districts for up to 205,000 acre-feet of water. The final agreements and environmental documentation are currently being prepared for board approval.

The Inland Feeder

Metropolitan's Inland Feeder consists of nearly 45 miles of tunnels and pipelines that will link the east branch of the State Water Project to Metropolitan's Diamond Valley Lake and Lake Mathews. Both reservoirs are in Riverside County. The Inland Feeder will allow Metropolitan to schedule its water deliveries to match weather patterns and the needs of the Bay-Delta estuary environment. Part of the pipeline is operational, made possible by an agreement between Metropolitan and San Bernardino Valley Municipal Water District. The agreement allows Metropolitan to blend additional water from the State Water Project with Colorado River water to increase overall water quality benefits. It also helps San Bernardino resolve long-standing groundwater issues.

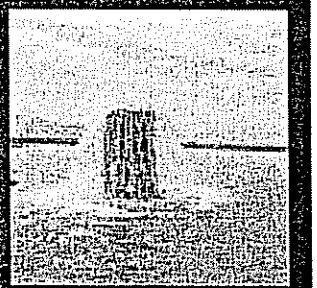


Breakthrough event for the Inland Feeder



Golden Aster (Heterotheca sessiliflora)
© 2002 Margo Bors

Water Storage, Transfer & Exchange Programs



Arvin-Edison test pump

Woodland Clarkia (Clarkia unguiculata)
© 2001 George Jackson

Semitropic Water Banking and Exchange Program

This program allows Metropolitan to store up to 350,000 acre-feet in the groundwater basin underlying the Semitropic Water Storage District in Kern County. The storage and withdrawal capacities of the program are shared with others—Metropolitan's share equals 35 percent. Over the next 33 years, the program will allow storage and withdrawal of 350,000 acre-feet.

Arvin-Edison Water Storage Program

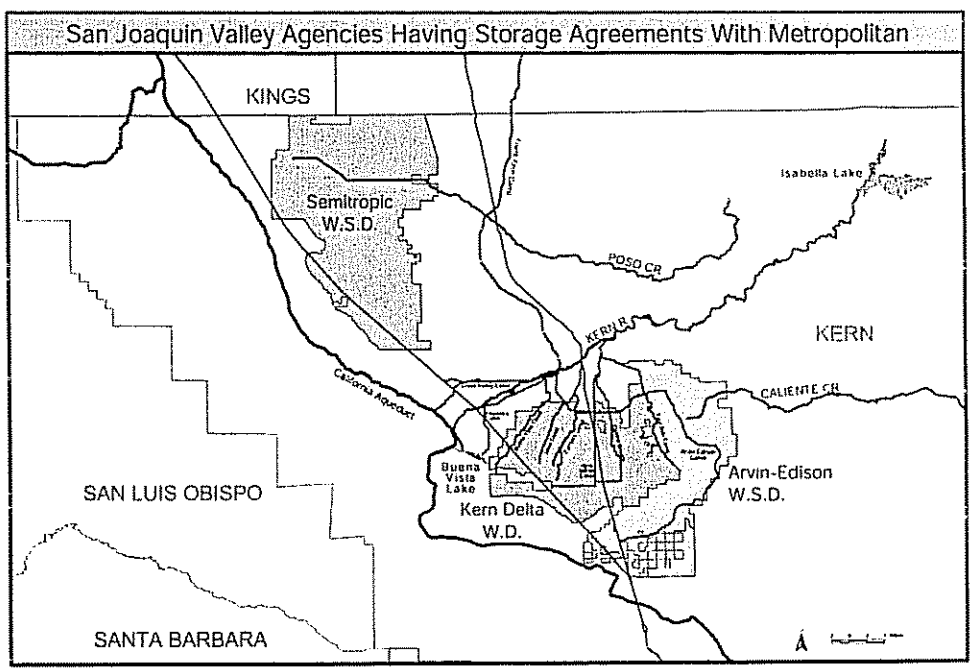
Metropolitan and the Arvin-Edison Water Storage District have developed a program that allows Metropolitan to store water in the groundwater basin in the Arvin-Edison service area located in Kern County. Over the next 25 to 30 years, dry-year withdrawals will average about 70,000 acre-feet.

Kern-Delta Storage Program

The Water Management Program Agreement with the Kern Delta Water District was approved by Metropolitan's board in November 2002. Under the 25-year program, Metropolitan will store up to 250,000 acre-feet of its available State Water Project supplies in the groundwater basin underlying Kern Delta.

San Bernardino Valley Program

Under the San Bernardino Valley Municipal Water District (SBVMWD) Program, Metropolitan purchases water provided to SBVMWD from its annual State Water Project (SWP) allocation. Depending on SWP conditions, approximately 20,000 to 80,000 acre-feet per year of water would be available for purchase. In addition, Metropolitan could store up to 50,000 acre-feet for later delivery from the San Bernardino groundwater basin.



Water Quality Programs

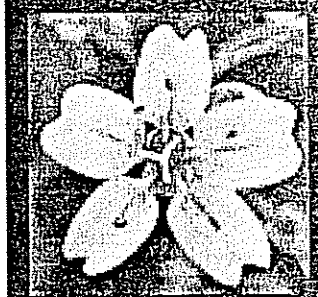
Metropolitan's Water Quality Initiative

Protecting Water at the Source, So You Can Trust it at the Tap

Metropolitan's water management priorities are simply stated: quality, reliability, and fairness. In support of this mandate, Metropolitan launched a number of water quality initiatives with progress made on national, regional and local levels. Among its water quality initiatives, Metropolitan:

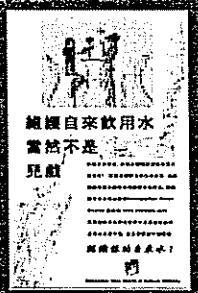
- Is retrofitting two water treatment plants to use ozone, a disinfectant highly effective in reducing disinfection by-products and other disease-causing contaminants
- Was instrumental in influencing Congress and federal agencies to require the Department of Energy to manage a large radioactive uranium-mill tailings pile and groundwater near the shore of the Colorado River at Moab, Utah and potentially dispose of it rather than treat and contain it on-site
- Continued participation in a federal-state basin-wide effort to reduce salinity in the Colorado River resulting in the formation of a Selenium Committee by the Colorado River Basin Salinity Control Forum to address concerns about the concentration of selenium in Imperial Valley drainage water
- Worked cooperatively with water and regulatory agencies in Nevada to clean up perchlorate contamination of the Colorado River at Lake Mead
- Supported the California Department of Water Resources' (DWR) policy to govern the quality of water in the California Aqueduct
- Developed a "rapid response" water quality team comprised of member agency and Metropolitan staff to coordinate emergency response and communications in the event of a water quality emergency
- Reexamined security efforts in the wake of the September 11, 2001 events, and authorized an additional $5.5 million for measures to further protect drinking water supplies and facilities
- Continued funding DWR's Municipal Water Quality Investigations Program that monitors and studies conditions affecting the drinking water quality of the Bay-Delta
- Continued water quality exchange partnerships with the Friant Water Users Authority and the Kings River Water Association with the goal to invest in local infrastructure in our partners' service areas. This provides an incentive for our partners to exchange high-quality Sierra water supplies for a portion of Metropolitan's State Water Project supplies
- Continued promoting water quality management as a water conservation measure. Water quality management not only protects public health and safety, but also serves as a water conservation measure. Better quality water results in less water use, greater water recycling opportunities, and preserves the integrity of stored supplies

Metropolitan's Flavor Profile Panel serves as an early warning system with a human touch.



Little Spring Beauty (Claytonia exigua ssp. exigua) © 2001 Bart and Susan Eisenberg

Water Quality Programs



One of six Asian language advertisements promoting water quality and safety

Blue eyed grass (Sisyrinchium bellum)
© 2002 George Jackson

Water Quality Outreach Program

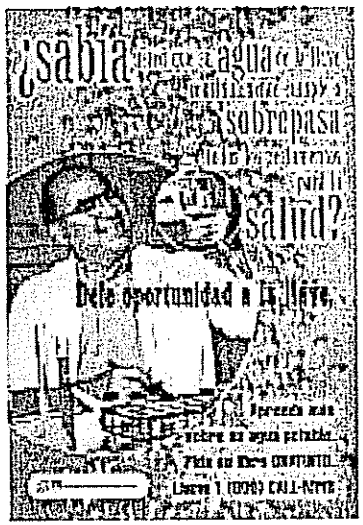
Know Your Water

"Know Your Water." These three simple words became the centerpiece of a multi-faceted educational outreach program for Metropolitan. The campaign started as an outgrowth of a regional telephone survey and focus group work commissioned by Metropolitan and conducted in 1997 and 1998. The survey revealed that many consumers didn't believe their utility was doing an adequate job of providing tap water that is safe to drink, and was not keeping consumers informed about water quality and safety issues.

The findings highlighted the need to develop more innovative and effective water quality communications so consumers could make informed choices about the water they drink. Demographic trends suggested that the communications be tailored to the ethnic communities within Southern California, and a pilot water quality information campaign targeting Hispanic consumers was subsequently developed.

The success of the program in Spanish-speaking communities prompted its expansion to Chinese and Cambodian communities. Focus groups within these communities tested a series of print and radio advertisements containing water quality and conservation messages, as well as participants' attitudes about tap water in general.

Metropolitan responded by translating a booklet called, "Everything You Ever Wanted to Know About Your Tapwater" into Khmer, Chinese, Korean and Vietnamese as well as preparing advertising for placement in several Asian-language newspapers. The central part of Metropolitan's 2002 Consumer Confidence Report (formally called the annual water quality report), which details the level of contaminants found in Metropolitan water sources, was translated and posted on the Internet in five Asian languages. Metropolitan plans to continue outreach to other communities that may not use English as their primary language.



Water Quality Programs

The following observations were made during a series of focus groups held within Cambodian and Chinese communities. Some of the sessions were conducted in English, while others were held in Khmer and Mandarin. A number of water quality and conservation topics were addressed. The highlights below reflect only attitudes about water conservation.

Most respondents indicated that "conserve water" meant:

- *Saving money*
- *Preparing for drought*
- *Helping the government*
- *Cutting back on usage*
- *Recycling water*

Overall, respondents were conscious about conserving water. Many, especially those who paid for their water, did something to conserve. Some of their methods of saving water were:

- *Setting up appropriate running times for lawn sprinkler systems*
- *Fixing leaky faucets/pipes promptly*
- *Putting objects inside the toilet tank to fill the tank with less water*
- *Taking shorter showers*
- *Washing cars less frequently*

Many respondents believed that there was currently a drought in California due to lack of rain this year.

The appropriate sources to provide reliable and accurate information about water conservation were:

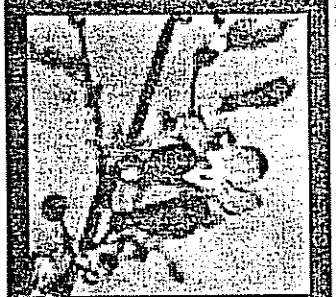
- *Government agency*
- *Water company*
- *Independent research institution*
- *Non-profit environmental group*
- *News media*

Why Salty Water is a Problem

The management of salt in our drinking water is both a water supply and water quality problem. Water high in salts is not good for recycling or groundwater projects. By limiting salts in our water supplies, the economy of Southern California and its environment both benefit. For a reduction of 100 milligrams of salt per liter in imported water supplies, the region collectively realizes savings of $100 million in avoided treatment and impact costs such as the replacement of household plumbing and appliances that have been corroded by salt, and reduced agricultural production.

Metropolitan is involved with several groups all focused on coordinating salinity management and identifying ways to reduce salt levels in imported water sources. These groups include the Colorado River Basin Salinity Control Forum, The Salinity Management Coalition, and the Desalination Research and Innovation Partnership. Southern California leaders also are working with urban areas in Arizona, Nevada, New Mexico and Texas to find solutions to mutual problems with salinity in the Colorado River. On November 1, 2002, Governor Gray Davis appointed Metropolitan's Vice President, Dennis Underwood, to represent California as a member of the Colorado River Basin Salinity Control Advisory Council and the Colorado River Basin Salinity Control Forum.

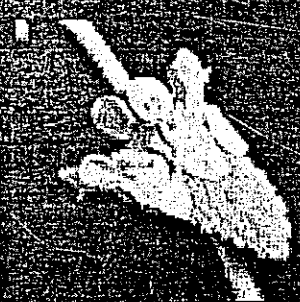
Focus groups help Metropolitan gain insight about consumer perceptions



Showy Penstemon (Penstemon spectabilis var. spectabilis)
© 1996 Christopher L. Christ

Public Participation

The Native Plant Forum was attended by more than 100 people to coordinate efforts and pool resources



Ajuga Hedge Nettle (Stachys ajugoides)
© 2002 George Jackson

Metropolitan recently concluded four years of a strategic planning process that outlined how the agency will ensure reliable, high-quality water supplies for Southern California's future needs. The introspective and analytical process was very open, with public participation invited and expected throughout. Whether it be defining a corporate identity or evaluating proposals for a seawater desalting plant, Metropolitan welcomes outside perspectives.

Outdoor Conservation Program

In November 2002, Metropolitan's board authorized $2.3 million for a region-wide public outreach program to foster water use reductions for summer 2003 and beyond. This action underlines Metropolitan's commitment to maintain conservation as a focal point for its resource management strategy.

As conservation becomes more and more integrated into the Southern California way of life, Metropolitan continues to look for innovative and far-reaching ways to achieve greater savings. A new and aggressive conservation program will focus on outdoor conservation and emphasize native and drought tolerant plants as a means of recapturing Southern California's natural landscape heritage.

The outdoor conservation program has two objectives:

1. To achieve a 7 to 12 percent reduction in water use
2. To enable Metropolitan to meet conservation goals set in the Integrated Resources Plan, through a long-term campaign

A prominent focus of the campaign will be outdoor water use, which can range from 30 to 70 percent of total household water consumption depending on the location within Metropolitan's service area. New tools and programs being developed to help reduce outdoor water use include water conservation technology improvements and financial incentives that will drive the new technologies and programs. Additionally, there are a range of initiatives to integrate the public ethic of adopting a lifestyle more suited to a semi-arid region and its natural climate cycles. These tools include a new on-line sprinkler index which guides outdoor irrigation controllers to be more efficient, rebates for a number of water-saving devices for both residential and industrial application, and a native and drought tolerant plant-based landscape program.

The "Southern California Heritage Gardens" program, created in partnership with Rancho Santa Ana Botanic Garden, will promote the appreciation and use of native plant themes in landscaping as a way to preempt the effects of drought. There are several aspects to this program that include outreach to institutions such as Caltrans, as well as municipal agencies and homebuilders. A Southern California Heritage Landscape Forum held in November 2002 jump-started the program by providing an opportunity to define areas of mutual interest and collective milestones that can serve to attract attention, resources and create momentum.

Public Participation

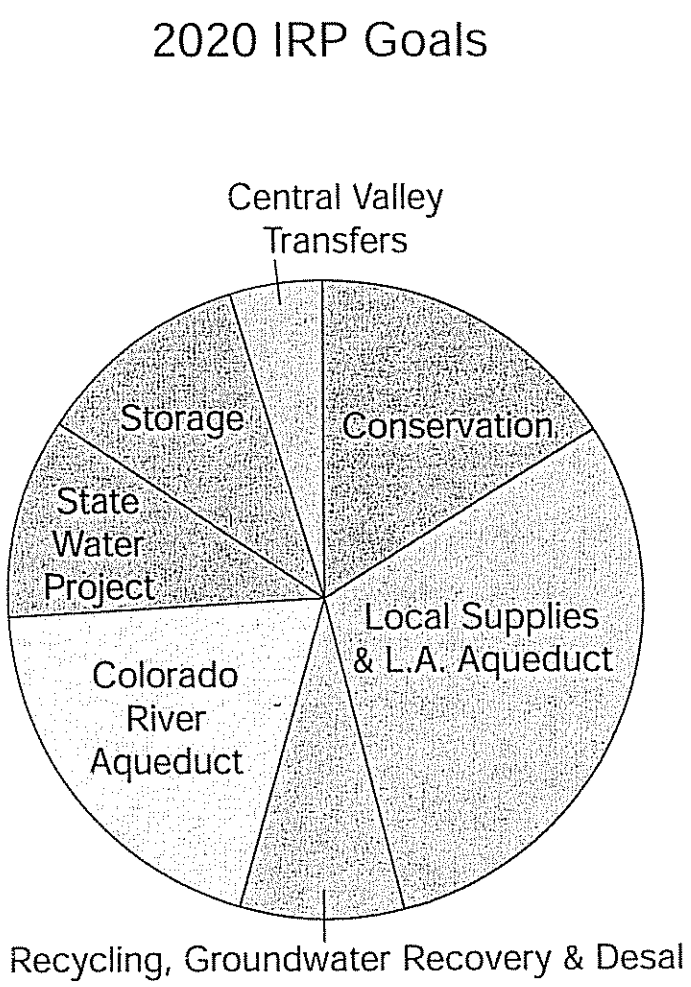
The Integrated Resources Plan for Southern California

In 2001, Metropolitan initiated the Integrated Resources Plan (IRP) Update. The IRP Update is an assessment of the progress made in implementing Southern California's water resource targets under the landmark 1996 IRP.

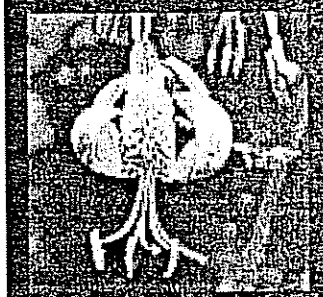
The 1996 IRP was a regional stakeholder planning process that culminated in a long-term water resources development strategy for Southern California. Included were goals for imported supply, recycling and groundwater recovery, surface and groundwater storage, and transfers.

With successful implementation of current IRP update and local development plans as outlined in member agencies' 2000 Urban Water Management Plans, Metropolitan would be able to provide reliable water service through 2025.

The need for buffer supplies to offset uncertainties beyond hydrology is being studied. A larger role for seawater desalination is envisioned along with increases in targets for conservation, recycling and groundwater recovery and Central Valley water transfers. Diversification of supplies remains the IRP's guiding principle.



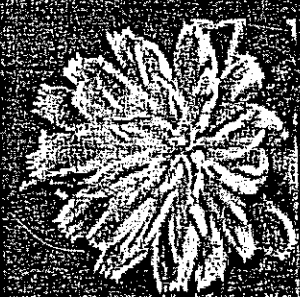
The IRP is designed to offset supply uncertainties tied to hydrology and other circumstances.



Humboldt's Lily (Lilium humboldtii)
© 1995 Br. Alfred Brousseau, Saint Mary's College

Public Participation

Metropolitan sponsorships for schools support water education programs and unique learning opportunities



Chicory-leaved Stephanomeria (Stephanomeria cichoriacea) © 2001 Robert Potts, California Academy of Sciences

Community Partnering Program

Metropolitan's Community Partnering Program (CPP) was created in 1999 to channel Metropolitan resources to community based groups, nonprofit organizations, and professional associations for activities that encourage discussion and involvement in regional water issues. Watershed management and protection programs are a primary focus of the program.

With a grass-roots orientation, the CPP supports programs that empower Southern Californians to learn more and become involved in water issues. The program encompasses sponsorships, memberships and support for selected activities that include research, educational collaborations, and policy forums.

CPP contributions for 2001-2002 totaled $550,000 and were divided among 74 projects. Each project is unique in scope, but all share the ability to reach people with a message about water. Metropolitan also uses the CPP to provide seed money for watershed protection--a high priority. Several important watershed restoration and improvement projects have received funding through the CPP.

To better understand the diversity of CPP funding recipients it is helpful to see a synopsis of projects. The following list represents only a fraction of organizations that have received CPP sponsorships, primarily for watershed management and landscape education programs. Other projects sponsored by the CPP are listed in the Appendix.

Alice M. Birney Elementary School

Greening Project. Students create a drought-tolerant garden in an outdoor learning environment.

Ballona Wetlands Foundation

Educational Project. CPP program supports "Wonders of Wetlands," an educational tool expected to reach nearly 5,000 students in grades 4 to 6 to focus on the functions of a wetland.

Bolsa Chica Land Trust

Habitat Restoration. CPP helps fund efforts to revegetate the Bolsa Chica Mesa to create a more livable habitat for animals and plant life and improve groundwater quality. Support was also provided to create "Miracles of a Marsh," a K-6 outdoor education program to address urban watershed management and water quality issues over three years that will host 5,000 students and 300 teachers.

Cal Poly Foundation, Inc.
CA State Polytechnic University

Demonstration Gardens. The 21st Century garden project will demonstrate water-conserving plant material, methods to capture rainwater, practices to minimize water loss and other microclimate efficiencies. Lessons from the gardens can be applied to school gardens.

Eco-Home Network

Water-efficient Home Tours. CPP co-sponsors the Eco-Home Showcase Tour highlighting homes with water conserving landscapes, irrigation and gray water systems, rainwater catchments and indoor water conserving systems and appliances.

Public Participation

El Centro de Accion Social, Inc.

School in the Park Program. CPP contributes to the comprehensive six-week Summer School in the Park program that reaches 300 low-income and recently immigrated Pasadena youth in grades K-12 in Pasadena's Center Park. Activities highlight water cycle, watersheds, and health benefits of water, water science lessons, water-related art projects, water storytelling and water in basic math problems.

Friends of the Angeles Chapter Foundation

Habitat Restoration. CPP contributes to the Woodland Farms Duck Farm study to develop habitat restoration and a detailed site study on 57 acres of San Gabriel River frontage.

Greater Los Angeles Zoo Association

Native Garden. CPP sponsors a native garden at the Zoo Magnet School to display the benefits of native plant gardens for water conservation and to attract native wildlife through native habitat.

Rancho Santa Ana Botanic Gardens

Learning Series. CPP supports the Fall Horticulture Series to teach homeowners how to incorporate water-saving native plants into their landscaping.

TreePeople

Youth Tour Program. CPP sponsors the Eco-Tours program for inner-city youth. Educators lead students and teachers through trails in Coldwater Canyon Park to learn about earth, water, air, plants and animals.

Heal the Bay

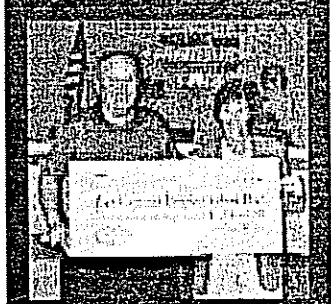
Watershed Studies. CPP supports "Key to the Sea" environmental education program that serves K-5 students and focuses on watershed stewardship, storm water pollution prevention, and marine conservation and beach ecology. The program reaches 9,600 students and 343 teachers through field trips to several facilities.

Las Virgenes Municipal Water District

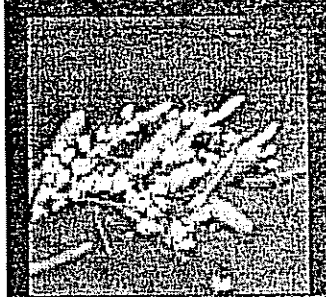
Community Center Garden. CPP sponsors a garden upgrade at the Agoura/Calabasas Community Center to include a native chaparral ecosystem.

The Theodore Payne Foundation

Conservation and Native Plants Program. Sponsorship of water conservation and California native plants program by the CPP educates and influences Southern California gardeners, landscape architects and contractors to reduce the current high demand of water for outdoor landscaping. A native plant gardening primer, focusing on the use of the native plants in drought-tolerant landscaping, will be printed for Earth Day April 2003 in English and Spanish.



Schools throughout Metropolitan's service area receive educational grants.



Saltmarsh Dodder (Cuscuta salina var. salina)
© 1995 Br. Alfred Brousseau, Saint Mary's College

Public Comments Excerpts

Public Comments at the December 9, 2002 Annual Public Hearing to Review Metropolitan's Urban Water Management Plan for Adequacy in Achieving an Increased Emphasis on Cost-Effective Conservation, Recycling, and Groundwater Recharge

"I'm the director of public works for the city of San Juan Capistrano, which manages the water for Capistrano Valley Water District and provides water to residents of the city of San Juan Capistrano and portion of the city of Dana Point...It is a small town and thanks to the subsidy provided by Metropolitan Water District, this year we started construction of a 4,800 acre-foot per year groundwater recovery project. This provides about half of our water supply, which is a major accomplishment for us. We entered into a service contract with a private company to do this project for us as a design/build/operate procurement strategy. It is a 20-year contract and it is a fixed fee contract of $907 per acre-foot, which is higher than our current MWD rate plus the $250 subsidy. However, recognizing the importance of this project and the benefits that this project provides to our environment and the regional benefits that it provides to the area, to south county area, our board decided to 'bite the bullet' and increase our rates 16%, and pay for this project. Again I want to thank the MWD for providing the subsidy and I would like to encourage you to continue the support."

- Amy Amirani, director of public works, city of San Juan Capistrano

"MWDOC is a regional wholesaler in Orange County, we aggregate for thirty-three member agencies, one of which is Amy's [Amirani] in Capistrano Valley. And, over the history of MWDOC we have had a very successful water use efficiency program, in no small part because of MWD's vision in creating its Conservation Credits Program, which enables agencies to basically contribute money through the water rate and have that come back in a small proportion on credits for conservation program implementation. It's through these regional programs in Orange County that we have had a great deal of success. It is very difficult if thirty-three agencies each had to have a separate conservation program, a separate marketing program, [and] a separate funding source. By having Metropolitan as an aggregator, and MWDOC as a local implementator in our region, we have had a great deal of success. In the life of this program, we have replaced more than 275,000 low efficiency toilets with low-flow toilets. So, while the Hetch Hetchy canal may be awesome and the MWD aqueduct may be awe-inspiring, we like to call our little project down there the 'Porcelain Canal'. That's not all that has happened over the last decade or so. In addition to the low-flow toilets, we've had home water surveys, master computer-controlled irrigation systems on very large centralized landscapes, [and] the Residential Clothes Washer Rebate Program has taken off. And, in addition to that, we're trying to look out into the future and one of the key things that seems to be coming into focus is the nexus with urban runoff, particularly the type of runoff that's laden with fertilizers that's from over watering of residential landscape. And it so happens that about the same time that that issue was coming to the fore, we found that there was a blossoming of new technology for computer-controlled irrigation systems at the home... Finally I think I would like to observe one perhaps constructive comment for Met moving into the future. The unit cost for the Conservation Credit has remained fixed since 1989 at $154 an acre-foot and it may be time to revisit that. I wouldn't want to hazard to guess as to where that should be set, but I think that $200 an acre-foot is a good starting point, or at least a place to look in analysis. And with that, I would just like to offer my thanks to our partners at Metropolitan and encourage the Legislature...to consider other ways that they can help push along water-use efficiency in Southern California and the rest of the state."

- Matt Stone, associate general manager, Municipal Water District of Orange County

Public Comments Excerpts

"I wanted to thank you for the opportunity to bring people together to make this report and I'm glad to see that there are so many people here [at this public hearing]... It forces everyone, whether they are involved in water conservation, water recycling, or some of the other areas that are covered by the report, to look at this source of water and to consider what the potential is for the future...You have had an Integrated Resources Plan for a long time, and you are now starting to update it again, but many things have been changing since you initially started your Integrated Resources Plan. And again, this report points at some of those, and the comments that people have made points at some of those changes, which I think are overall quite good. Conservation used to be a dry year solution. That has changed here at Metropolitan. Conservation here is not just a dry year activity. It is something that we will be doing year round and increasingly...I think Met's point about focusing on what are the avoided costs of conservation as a way of looking at what's the appropriate monetary value to put on conservation and many of the other things that are being done here: water quality improvements, storm water issues... all of those are going to be ways in which you will be better able, as Metropolitan Water District officials, to make decisions on where you want to invest your dollars in the future...So I'm pleased to be able to congratulate the MWD for the work that they have done in all of the areas that are covered by the report. But not to rest on their laurels, because there is a tremendous opportunity, we are unlikely to be getting federal and state subsidies at the level we've had at the past, in the future, and yet we still have to supply high quality water, not only for people, but for the environment. And, it will be through these cost effective local projects. I think these are the places where we are going to be able to make tremendous gains, [and] perhaps not experience shortages that many are projecting."

- Frances Spivy-Weber, executive director of policy, Mono Lake Committee

"I would just like to note that I'm very pleased that Metropolitan Water District of Southern California, through its Native Plant and Outdoor Conservation Program, has quantified and recognized the significance of outdoor water use in urban areas and the great potential largely untapped, pardon the pun, for water conservation. First, a note about Rancho Santa Ana Botanic Garden...we were founded in 1927 in Orange County, we moved to Claremont in 1951. Our garden has 86 acres with programs in botanical research, graduate education, plant display, community in K-12 education, and plant diversity conservation...A key part of our mission concerns promoting urban landscape use of native Californian plants for four reasons: First to promote California's sense of place so that we don't all look like Ohio, where I came from. Also, to increase the appreciation of nature. Thirdly, because native Californian plants are not invasive, in other words they don't get loose in natural environments and out-compete the desirable plants. And last, but certainly not least, is that they conserve water in the landscape. We all face some very difficult challenges in doing this together. First is the challenge of perception. Many persons out there, gardeners, think that if you are going to have a native plant landscape, it is going to look like chaparral. That is not true that native plants are very fussy in the landscapes. Some are, but many are not. And that you need to be an expert in order to garden or landscape with natives — that also is not true — but it is a challenge to battle those misperceptions. Another perception, unfortunately that is true...concerns the availability of native plants. About a year ago, I did a study of the retail nursery industry, in which I asked the question, what proportion of the plants available in Southern California, for landscaping, are native to Southern California?...Well the grand answer to this, unfortunately, is 0.1%. Very, very few plants that you can buy at the major retail outlets are native to Southern California. So, what I am suggesting that we do, is to select the garden-worthy natives and concentrate on promoting

them so that we have a reliable palate. Our third challenge concerns expertise in growing, selecting, and managing native landscapes, so that we have successful landscapes. That involves the nursery trade, it involves landscape designers, including home gardeners, and landscape maintenance professionals. So there are four initiatives that I see as doing largely together... One is selecting the best native plants for urban landscaping. There are 6000 species and varieties native to the state of California. The vast, vast majority, I think we would agree, are not really good garden-worthy plants. We need to select the best ones, and we're making some progress on that and advocating their use. Second, is working with the mainstream nursery industry to develop their expertise and their marketing with regard to native plants. They can make a lot of money at this. Third, [is the establishment of] demonstration gardens, [and] institutional and home gardens, where anyone can see that native gardens are beautiful, and more importantly, feasible. And finally, training landscape maintenance professionals. Your Protector Del Aqua Program is a terrific start in that direction. So to conclude, I would just say that I look forward to collaborating with MWD in achieving our common end of Southern California urban landscape characterized by handsome, water-efficient gardens, featuring plants native to California and I'll be keeping an eye on that 0.1% number and hope that we can do something about it."

- Clem Hamilton, executive director, Rancho Santa Ana Botanic Garden at Claremont (similar written comments were also received)

"The Hayden bills really are the opportunity for Southern California to get some credit for the work we've done in conservation, groundwater recovery, and water reclamation...I want to commend Met on the efforts it's made and the investments it's made, but I want to say...we really have to look towards the future and...to say how we are going to expand on our existing programs and build on the success we've had in the past. You have an opportunity this afternoon with our continued funding of the clothes washer program here. As success builds, money runs out for a lot of these programs, sometimes a lot more quickly than you anticipate. The same will probably happen with the commercial/industrial program, which Met did step up and fund. As it was mentioned before, we are having less funding opportunities, obviously from the state and the federal government, and so all local agencies and Met are going to have to fund these programs and make them work. I do want to say that the move towards outdoor landscaping, for a lot of water is being used and wasted, and commercial/industrial programs are very important. And also the links that you are making between water quality and storm water [are important]...So, I wanted to thank you for this opportunity, but I wanted you to also look to the future and perhaps this report can look at more what we are going to be doing, then what we have done in the past."

- Conner Everts, executive director, Southern California Watershed Alliance

"For a number of years I've been involved in looking at landscapes from the standpoint of sustainability, and in this process it has taken me to look at the role of plants and become very clear about their significance and importance to life on this planet, and their foundation role in sustaining ecosystems...we create landscapes in our urban environments, and through studying many factors you can, pretty convincingly conclude, that none of our urban landscapes are truly sustainable. They need some form of subsidy, and ultimately do lead to a greater release of carbon than storage of carbon, greater consumption of oxygen than release of oxygen, and a greater net production of pollution, indirectly and directly through the way that we plan, design, and maintain our landscapes.

Public Comments Excerpts

So, we have a product here that is very counterproductive and a lot of what is stimulating this counterproductive product is the availability of water and the way in that we choose to use it and historically we have had access to water at a very cheap rate and abundant supplies that has allowed us to define lifestyle as a way of expressing it through landscape. I'm very pleased to see Metropolitan beginning to show, through their conservation programs these days, the intent to step into the landscape issue and to work with it, with the goal of conserving resources, mainly water. In this regard, I've looked at a number of programs here, and realized that saving water and landscape is not simply done through retrofitting some of the equipment but is affecting peoples' awareness and their sense of values. And, I like very much to hear in this conservation program, the idea of returning to California's natural heritage, and think that we need to really embrace upon visions and programs that speak to people's hearts and commitments to how they wish to live and I do see this beginning to happen in the conservation program again. Along these lines, a practical note is to realize the need to work with water pricing, that many people are influenced by the cost of water and this is going to stimulate their choices and to have them take the issue of conservation more seriously. The idea of working with California native plants also allows us to talk about the sense of community, the sense of place, and again I find these to be very powerful concepts and influential ones to continue to incorporate in the Metropolitan programs in the future. And so I am very positive about the latest activities over the past year to develop the landscape conservation program and to work in this direction."

- Bob Perry, landscape architect

"I just wanted to share with the group some perspectives that our utility has with regard to future urban water management plans, in light of a new report that has come out by the Department of Water Resources, which indicates what their draft guidelines for implementation of Senate Bill 610 and Senate Bill 221 are [Draft Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001, to assist water suppliers, cities, and counties in integrating water and land use planning, Department of Water Resources, September 25, 2002]... in our view, the bar has been raised with future urban water management plans... and since all of our water comes from Metropolitan, we're suggesting that the schedule shift a little bit for Metropolitan [to supply applicable data], since we are going to need at least some of your data on [SB] 610/221 compliance. And, we would hope that that data would be available at least by the first quarter of the year that it's due, and our only suggestion is that when this group meets next year, hopefully you have a plan on how to accomplish that."

- Norm Buehring, director of resource conservation, Las Virgenes Municipal Water District

Community Partnering Program Recipients

Other Recipients of Community Partnering Program Co-sponsored Educational Projects in 2002 include:

Abuelitos Internacional

Creation of a three-part series of children's books on environmental protection, including water conservation

Ask Earthman Foundation

Video series for television includes ecology, conservation, and California's environmental heritage

California Science Center, Los Angeles

Community youth water education program for more than 2,000 students

City of Oxnard

Groundwater recovery enhancement and treatment outreach program with emphasis on recycled water

City of Pasadena Department of Water and Power

Consumer water forum

City of Santa Monica

Ballona Creek Watershed/Wetlands map Phase II

Friends of the Children's Museum

On-going water resources education via a proposed exhibit, "Clear Water Mountain." Museum attendance approximately 50,000 students and 30,000 walk-ins annually

Helix Water District

Community outreach program for new water treatment plant for elementary students and adults

Rincon del Diablo Metropolitan Water District

Upgrading of demonstration garden for xeriscape awareness and residential landscape classes

Sacramento River Watershed Program

Partnership with News 10 to promote public awareness on watershed issues and water purity issues

South Coast Resource Conservation and Development

"Conservation on Wheels: the pH Experience" teaches third and fourth graders the importance of healthy watersheds

Community Partnering Program Recipients

The Foundation for Cal State San Bernardino

Water festival 2003, includes water forum, school garden; attendance 10,000

The Japanese Garden

Public education center to teach and promote water conservation, reclamation, reuse and general water science awareness

Three Valleys Municipal Water District

Learning to be Water-Wise program for 630 fifth-grade students

TODEC Legal Center

Outreach program on water issues for limited- and non-English-speaking rural Riverside County agricultural workers

Water Conservation Garden Authority

Production of an educational 30-minute video on water conservation, irrigation and xeriscape techniques for use on public-access TV

Water Education Foundation

Sponsorship of water resources, water leaders and water law courses

Water Resources Center Archives

California colloquium on water lecture series, available to all UC students through on-line library system and newsletter

Western Municipal Water District—The Water Education Advisory Council

Project WET workshop for 54 teachers and 1,700 students, and signage for existing xeriscape garden

White Memorial Medical Center

Water education programs for educators and healthcare workers

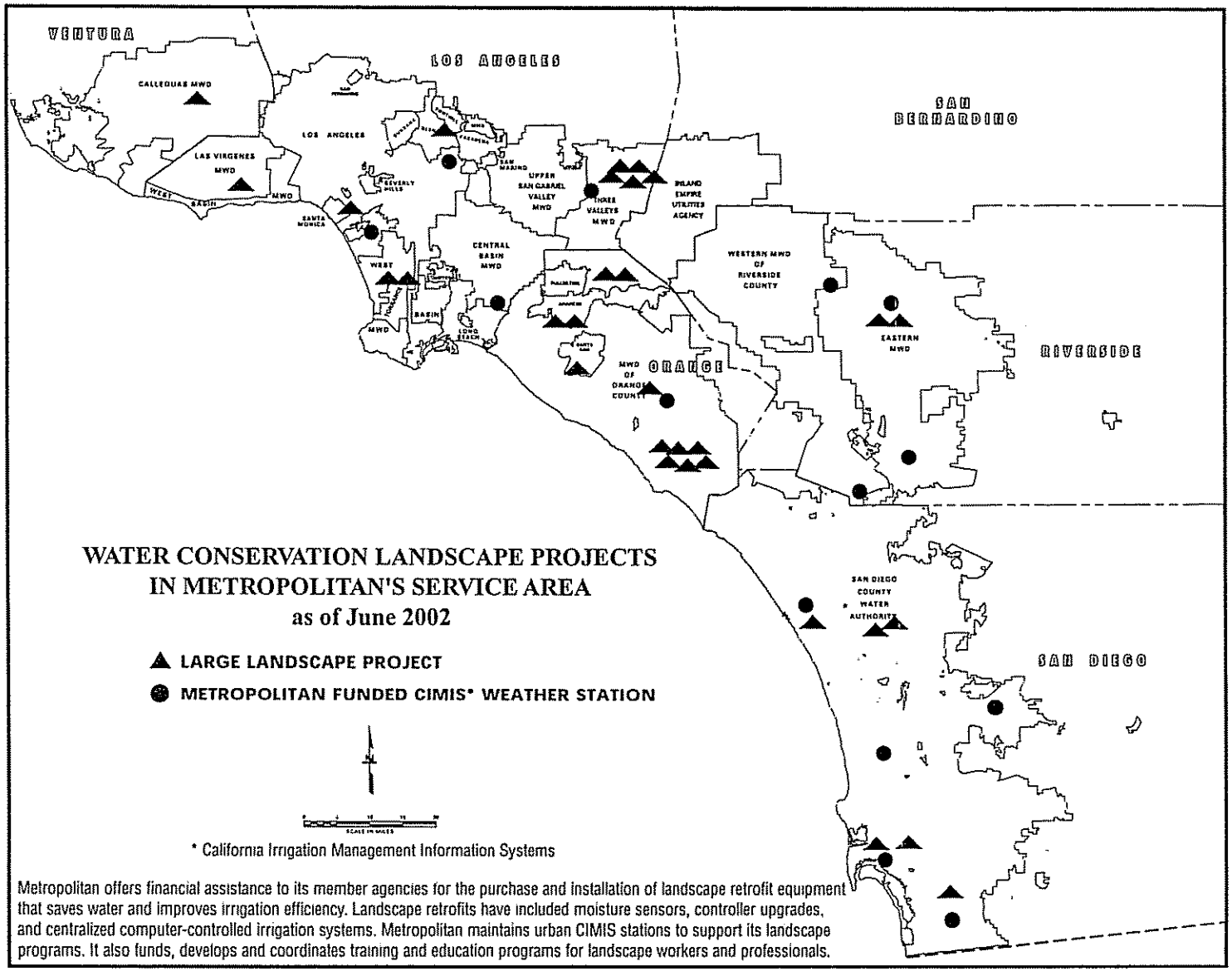
Summary of Metropolitan's Best Management Practices (BMP)
Conservation Programs

BMP #	BMP name	Metropolitan Program Description	Metropolitan Program Activities	Quantities 6-30-01	Dollars Through 6-30-01	Quantities FY 2002	Dollars FY 2002
1	Residential Water Surveys	Financial support for surveys, retrofits & R&D	Surveys Toilet device distribution Residential R&D (projects)	62,096 1,130,196 8	$1,779,935 $1,303,436 $299,799	3,641 613	$94,292 $2,087
2	Residential Plumbing Retrofits	Financial support for retrofits & distribution	Low-flow showerheads distributed Faucet aerators distributed	2,960,929 211,471	$12,375,809 $210,305	1,480 3,831	$7,231 $3,831
3	System Water Audits, Leak Detection	Distribution system leak detection audits	MWD surveys own pipes & aqueducts MWD water audits & leak detection for MAs	Annually 6	$3,150,000 $280,000	Annual	$350,000
4	Metering & Commodity Rates	All connections metered		N/A	Yes	N/A	Yes
5	Large Landscape	Financial support for surveys, retrofits, education & R&D	Audits conducted Moisture sensors Irrigation controllers Central controllers Protector del Agua graduates Landscape education Circuit rider program (cities) Landscape R&D (projects)	1,530 499 45 4 11,080 24 240 10	$666,441 $132,329 $299,006 $490,692 $883,601 $45,485 $162,250 $324,586	132 1 5,421 N/A	$44,682 $6,139 $278,535 $32,052
6	High Efficiency Washing Machines	Financial support for rebates	Residental HE washers rebated (via MAs) Residental HE washers rebated (via energy utilities)	13,121 8,060	$453,480 $282,100	10,047	$350,985
7	Public Information	Materials & programs provided		N/A	$11,028,160	N/A	$376,481
8	School Education	Full range of school curricula		N/A	$6,664,157	N/A	$750,000
9	Commercial, Industrial, Institutional	Financial support for surveys, retrofits, workshops & R&D	ULFTs Urinals Flush valve kits Cooling tower retrofits Clothes washer rebates Industrial process improvements Pre-rinse spray valves Surveys Workshops on commercial retrofits CII R&D (projects)	31,628 564 185 221 3,411 N/A N/A 905 7 10	$1,865,880 $41,036 $2,775 $103,000 $288,500 N/A N/A $650,000 $7,000 $325,071	9,091 152 80 80 2,792 1 53 1 N/A	$566,428 $11,695 $1,983 $42,825 $512,885 $84,284 $3,525 $1,000 $2,523
10	Wholesale Agency Assistance	Financial support & assistance provided for BMPs 1-9 & 11-14		N/A	See Total Below	N/A	See Total Below
11	Conservation Pricing	Commodity rate structure in place		N/A	Yes	N/A	Yes
12	Conservation Coordinator	Staff of 9 people		N/A	$8,784,000	N/A	$965,690
13	Water Waste Prohibition	Exempt		N/A	N/A	N/A	N/A
14	Residential ULFT Replacements	Financial support for retrofits & rebates	Toilet rebates for retrofits	1,618,481	$102,518,878	190,463	$11,428,780

Total Spent by Metropolitan Water District:	$155,418,000	$15,917,000
Total Spent by Metropolitan Water District Through FY 2002:		$171,335,000

(Totals have been rounded)

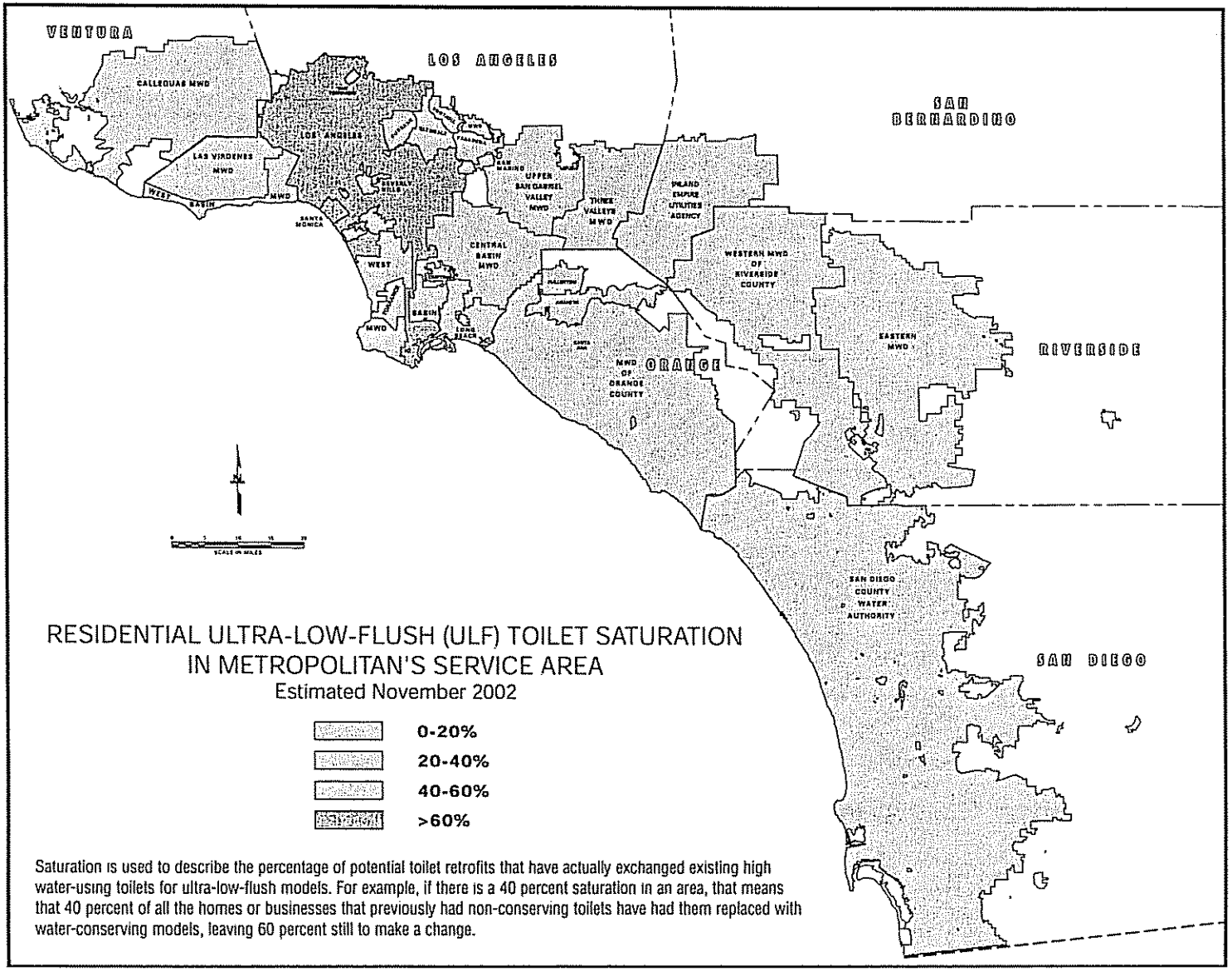
Water Conservation Landscape Projects



* California Irrigation Management Information Systems

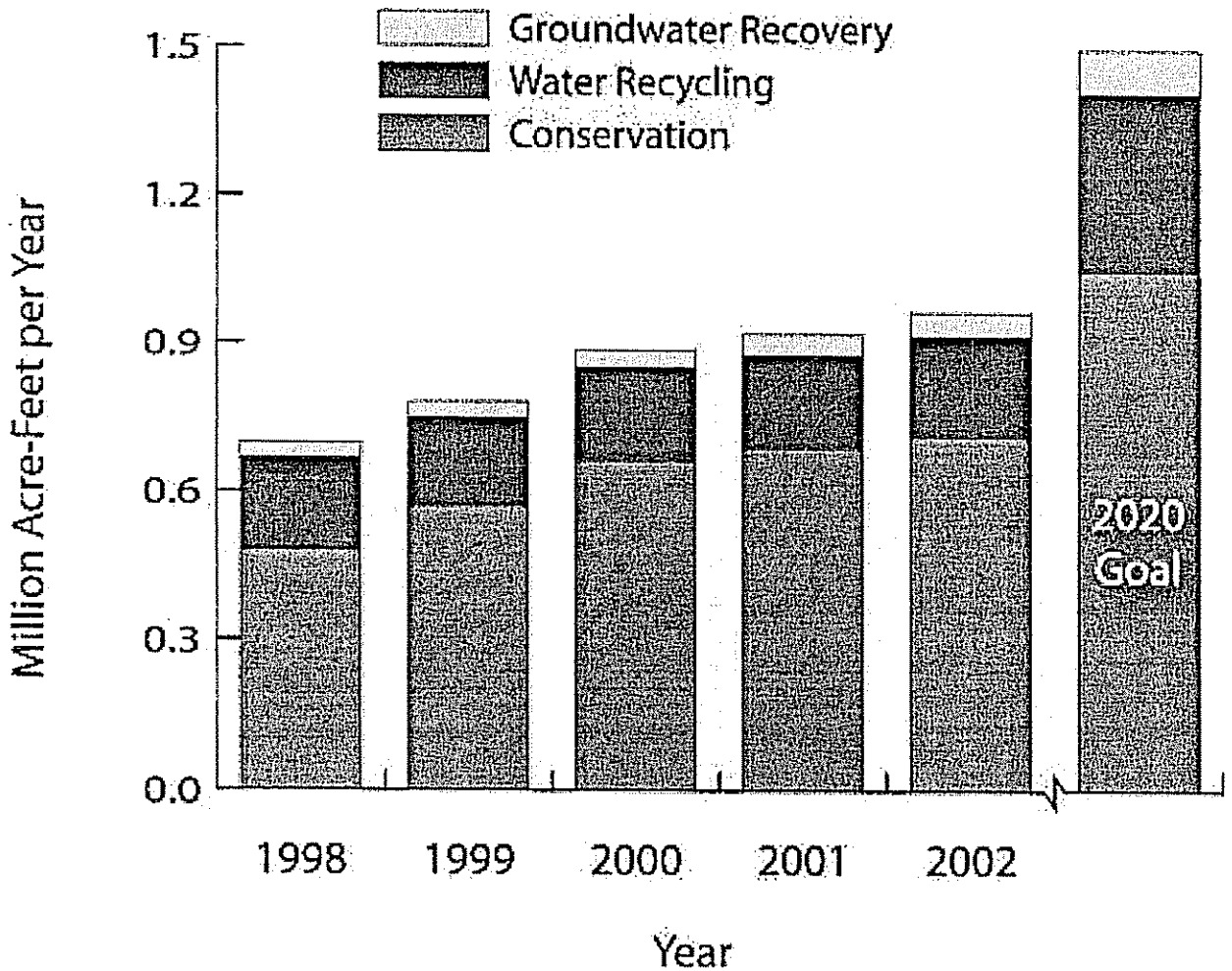
Metropolitan offers financial assistance to its member agencies for the purchase and installation of landscape retrofit equipment that saves water and improves irrigation efficiency. Landscape retrofits have included moisture sensors, controller upgrades, and centralized computer-controlled irrigation systems. Metropolitan maintains urban CIMIS stations to support its landscape programs. It also funds, develops and coordinates training and education programs for landscape workers and professionals.

Residential Ultra-Low-Flush Toilet Saturation



Saturation is used to describe the percentage of potential toilet retrofits that have actually exchanged existing high water-using toilets for ultra-low-flush models. For example, if there is a 40 percent saturation in an area, that means that 40 percent of all the homes or businesses that previously had non-conserving toilets have had them replaced with water-conserving models, leaving 60 percent still to make a change.

Comparison of Regional Conservation, Water Recycling, and Groundwater Recovery with 2020 Integrated Resources Plan Goal



Native Plant Resource Guide

This list offers a good starting place to learn more about native plants. There are many more resources available.

Botanic Gardens Displaying Native Plants

Descanso Gardens
(818) 949-4200 (La Cañada)
www.descansogardens.org

Fullerton Arboretum
(714) 278-3579
www.arboretum.fullerton.edu

Rancho Santa Ana Botanic Garden
(909) 625-8767 (Claremont)
www.rsabg.org

UC Riverside Botanic Gardens
(909) 787-4650
www.gardens.ucr.edu

Native Plant and Water Conservation Demonstration Gardens

The Water Conservation Garden
(619) 660-1684 (El Cajon)

El Alisal: Charles F. Lummis Home
(213) 222-0546 (Los Angeles)

Landscapes Southern California Style
(909) 780-4170 (Riverside)

Waterwise Garden
(714) 765-4256 (Anaheim)

E. Rowley Demonstration Garden
(909) 626-2711 (Montclair)

South Coast Botanic Garden
(310) 544-6815 (Palos Verdes Penninsula)

Organizations

Metropolitan Water District of Southern California
www.mwdh2o.com

Rancho Santa Ana Botanic Garden
(909) 625-8767
www.rsabg.org

California Native Plant Society
www.cnps.org

California Oaks Foundation
www.californiaoaks.org

Theodore Payne Foundation
(818) 768-1802
www.theodorepayne.org

Wildflower Hotline
(March-May)
(818) 768-3533

Nurseries

Dean's Greens
(909) 899-1820 (Etiwanda)

El Nativo Growers, Inc.
(626) 969-8449 (Azusa)

Garrison Foothill Nursery
(909) 949-9878 (Upland)

Las Pilitas Nursery
(760) 749-5992 (Escondido)

Matilija Nursery
(805) 523-8604 (Moorpark)

Mockingbird Nursery
(909) 780-4571 (Riverside)

Mt. Fuji Nursery
(909) 985-2219 (Upland)

Native Sons
(805) 481-5996 (Arroyo Grande)

Persson's Nursery
(626) 792-6073 (Pasadena)

San Marcos Growers
(805) 683-1561 (Santa Barbara)

Suncrest Nurseries, Inc.
(831) 728-2595 (Watsonville)

Tarweed Nursery & Landscape
(818) 888-2318 (Chatsworth)

The Garden
(909) 629-2062 (Pomona)

Tree of Life Nursery
(949) 728-0685 (San Juan Capistrano)

Sections 130.5 and 130.7 of the Metropolitan Water District Act

Added by Statutes of 1999, Chapter 415 (SB 60 (Hayden))

130.5. (a) The Legislature finds and declares all of the following:

(1) The Metropolitan Water District of Southern California reports that conservation provides 7 percent of its "water resource mix" for 1998, and conservation is projected to provide 13 percent of its total water resources by 2020. Conservation, water recycling, and groundwater recovery, combined, provide 12 percent of the district's total water resources for 1998 and those water resources are projected to increase to 25 percent of the district's total water resources by 2020.

(2) It is the intent of the Legislature that the Metropolitan Water District of Southern California expand water conservation, water recycling, and groundwater recovery efforts.

(b) The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures.

(c) The Metropolitan Water District of Southern California shall hold an annual public hearing, which may be held during a regularly scheduled meeting of the Board of Directors of the Metropolitan Water District of Southern California, during which the district shall review its urban water management plan, adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code, for adequacy in achieving an increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section.

The Board of Directors of the Metropolitan Water District of Southern California may modify any ongoing program as necessary to meet that requirement, consistent with the district's urban water management plan.

(d) The district shall invite to the hearings knowledgeable persons from the fields of water conservation and sustainability, and shall consider factors of availability, water quality, regional self-sufficiency, benefits for species and environment, the totality of life-cycle costs, including avoided costs, and short- and long-term employment and economic benefits.

(e) On or before February 1, 2001, and on or before each February 1 thereafter, the Metropolitan Water District of Southern California shall prepare and submit to the Legislature a report on its progress in achieving the goals of increased emphasis on cost-effective conservation, recycling, and groundwater recharge in accordance with this section, and any recommendations for actions with regard to policy or budget matters to facilitate the achievement of those goals.

(f) Nothing in this section shall diminish the authority of the Metropolitan Water District of Southern California pursuant to Section 25 or any other provision of this act, or otherwise affect the purposes of the Metropolitan Water District of Southern California as described in existing law.

130.7. (a) The Metropolitan Water District of Southern California, in cooperation with the following entities, shall participate in considering programs of groundwater recharge and and replenishment, watershed management, habitat restoration, and environmentally compatible community development utilizing the resource potential of the Los Angeles River, the San Gabriel River, or other southern California rivers, including storm water runoff from these rivers:

(1) Member public agencies whose boundaries include any part of the Los Angeles River, the San Gabriel River, or any other river in southern California.

(2) The Water Replenishment District of Southern California.

(3) Local public water purveyors and other appropriate groundwater entities.

(4) The County of Los Angeles.

(5) The United States Army Corps of Engineers.

(b) Nothing in this section affects the powers and purposes of the Water Replenishment District of Southern California or any other groundwater management entity, the County of Los Angeles, local public water purveyors, or the United States Army Corps of Engineers.

Member Agencies

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928

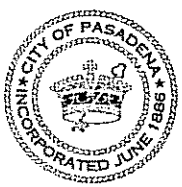
Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928



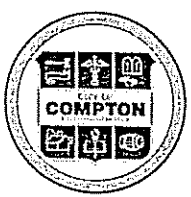
Joined Metropolitan
December 6, 1928

Joined Metropolitan
December 6, 1928

Joined Metropolitan
February 27, 1931

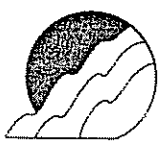
Joined Metropolitan
February 27, 1931

Joined Metropolitan
February 27, 1931



Joined Metropolitan
February 27, 1931

Joined Metropolitan
December 17, 1946

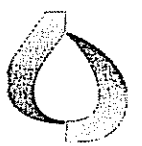


Joined Metropolitan
July 23, 1948

Joined Metropolitan
October 16, 1950

Joined Metropolitan
November 15, 1950

Joined Metropolitan
November 26, 1951



Joined Metropolitan
November 26, 1951

Joined Metropolitan
January 15, 1953

Joined Metropolitan
November 12, 1954

Joined Metropolitan
November 12, 1954

Joined Metropolitan
December 1, 1960

Joined Metropolitan
December 14, 1960

Joined Metropolitan
March 27, 1963

Joined Metropolitan
November 12, 1971